



January 2, 2024

Mr. Sean Conway
Deputy Chief Counsel
National Telecommunications and Information Administration (NTIA)
1401 Constitution Avenue, NW
Washington, D.C. 20230

Re: National Spectrum Strategy (NSS) Implementation Plan Public Notice Submission

Dear Mr. Conway,

Spectrum for the Future greatly appreciates the opportunity to provide input to the National Telecommunications and Information Administration (NTIA) regarding how NTIA can best structure its Implementation Plan for the National Spectrum Strategy (NSS).

Spectrum for the Future represents a diverse coalition of innovators, anchor institutions, and technology companies using shared and locally licensed spectrum to build America's future technology leadership, industrial might, and global competitiveness.¹ In this submission, we seek to highlight how the NTIA – through its work as part of the NSS – can ensure U.S. global leadership, support wireless innovation, encourage competition, and maximize spectrum efficiency by facilitating locally licensed spectrum sharing.

Consumers and businesses rely on wireless devices to enable their work and enrich their daily lives. The quantity of these devices and the bandwidth they consume are growing at an ever-increasing rate, making it critical that we maximize use of the limited airwaves available to power them. It is no longer possible to meet this increasing demand for wireless spectrum with a basic, clear-then-auction method, which – even when possible – makes bandwidth available only for the exclusive use of a handful of companies pursuing the legacy wireless business model.

In this submission, we focus our suggestions on the work to be done in the lower 3 GHz band and the 37 GHz band.

Supporting Shared and Locally Licensed Spectrum in the 3.1-3.45 GHz Band

Implementing a shared, locally licensed spectrum model in the 3.1-3.45 GHz band at power levels consistent with the Citizens Broadband Radio Service (CBRS) is the best available path for America to lead globally on wireless deployment for 5G *and* the technologies that will soon follow. Importantly, using a framework like this, based off CBRS, will also bolster economic activity, foster innovation, and safeguard military readiness.

Following the enactment of the Infrastructure Investment and Jobs Act of 2021, the Department of Defense (DoD) completed its multi-year Partnering to Advance Trusted and Holistic Spectrum

¹ Coalition supporters include Airspan, CalChip Connect, Celona, Charter Communications, Comcast Corporation, Cox Communications, Dynamic Spectrum Alliance, Federated Wireless, NCTA, New America Open Technology Institute, Pollen Mobile, Pronto, Public Knowledge, SHLB, Shure, and WISPA. More info at: <https://spectrumfuture.com/>



Solutions (PATHSS) process, co-chaired by NTIA and directly involving industry leaders. That process produced the Emerging Mid-band Radar Spectrum Study (EMBRSS) study, which determined that sharing is feasible in the 3.1-3.45 GHz band assuming advanced interference-mitigation and coordination frameworks are adopted.² As part of the NSS, the President has tasked the Department of Commerce and DoD with any follow-on studies of this band to explore dynamic spectrum sharing and other opportunities for private-sector access.

As the Federal Government carries out that work, Spectrum for the Future suggests the Administration consider at least the following three guideposts:

1. The Department of Commerce and DoD should focus their study on improving the conditions for sharing and should not spend substantial time exploring options for commercialization that facially are not viable.

Focusing on a shared framework with power levels akin to CBRS provides the most obvious and meaningful path for the Administration's success in making spectrum available in the 3.1-3.45 GHz band. To start, such a framework could coexist with the federal users that currently occupy the band without requiring expensive relocation or compression.

In contrast, advocates of high-power, exclusive licensing in the lower 3 GHz band want to see the Department of Defense vacate – rather than share – the band, which is critical for defense systems that service members train on before deploying overseas and use every day to protect our homeland. Pentagon CIO John Sherman argued that this severe disruption would be “absolutely untenable,” with the Pentagon estimating that vacating the band would cost DoD hundreds of billions of dollars, take decades to complete, and put national security at risk.

Even putting the national security and practical issues aside, when accounting for the costs of sharing with existing federal users, the latest research from the Brattle Group illustrates that shared, local licensing is significantly more likely to result in a successful auction. Specifically, the study concludes that a shared approach in the 3.1-3.45 GHz band can generate almost \$19 billion³ in revenue for the American people to pay down the deficit or fund new priorities.

On the other hand, the same study finds that a high-power auction of the band will likely result in a loss to the U.S. Treasury given substantial relocation costs that would dwarf any auction proceeds. Segmenting the band raises similar concerns from a cost perspective but would further reduce the auction revenue, again creating risk of failure.

2. An expedited study of the 3.1-3.45 GHz band – concluding well before the two-year timeline – will promote U.S. leadership in advanced and emerging technologies. A protracted study based on segmentation and compression, or total relocation, will undermine that leadership.

Given the success of CBRS, the industry is prepared to put similarly shared spectrum in the 3.1-3.45 GHz band to good use quickly for applications supporting manufacturing, broadband access, education, and competition in the consumer wireless market. In this way, an expedited

² “[National Spectrum Strategy](#),” Page 6, The White House, Released November 2023

³ “[Principles of Spectrum Sharing: Understanding the Value of Shared Spectrum](#),” The Brattle Group, September 18, 2023



study to make the lower 3 GHz band available supports Pillar 1 of the NSS: ensuring U.S. leadership in advanced and emerging technologies.

CBRS offers a proven track record for success in driving more 5G options for consumers and businesses, more competition between carriers, and more innovation in wireless technology. The CBRS band's proximity to the lower 3 GHz band – and similar presence of federal incumbent users – means that much of the equipment, spectral properties, and sharing techniques can be appropriately modified for deployment in the 3.1-3.45 GHz band without the need to reinvent the wheel. Shared, locally licensed services in the lower 3 GHz band could leverage the burgeoning market that already exists in CBRS.

A local licensing, shared framework at CBRS-like power levels in the lower 3 GHz band would promote the bottom-up innovation that America was built on, a type of innovation that our global economic competitors like the People's Republic of China cannot match. Of note, complex, intelligent manufacturing operations across the U.S., including semiconductor fabrication plants, benefit from new competition that utilizes shared spectrum from the CBRS band to enhance their technical manufacturing work. Companies such as Taiwan Semiconductor Manufacturer Company, John Deere, and DOW, for example, already use CBRS at their manufacturing and fabrication sites in the U.S. Others around the globe have followed a similar shared, local licensing framework.

A study focused on improving sharing could be concluded more quickly than the alternative since the 3.1-3.45 GHz band has already been extensively studied, and the Federal Government can leverage the work used to produce the EMBRSS study – including the submissions and record built as part of the PATHSS process – as a basis to support the additional work to be done. In that way, the Administration can and should move to quickly conclude any additional studies of the 3.1-3.45 GHz band. A drawn-out study for total re-allocation of the band or segmentation will not promote the goals of the NSS. Going first or at least early is a necessary pre-requisite for U.S. leadership, while slowing down the process with a protracted, more extended study would further undermine U.S. leadership.

3. The Federal Government should engage with the public to the extent any additional study is needed of the 3.1-3.45 GHz band to ensure non-federal uses can be rapidly deployed after re-allocation.

Any additional study determined necessary for the 3.1-3.45 GHz band should be transparent and involve public input. Indeed, basing the process for any additional study on robust public participation is supported by the Presidential Memorandum from November. Public participation should be facilitated through a non-governmental convening body to best enable an open, quick, and flexible process – as was done in the PATHSS process led by DoD and NTIA. Such a process should be open to all interested participants, not only appointed special governmental employees, as could be the case if certain existing federal advisory committees were used.

At a minimum, we also suggest that the unclassified findings of the EMBRSS study be made available so that stakeholders can use those to provide additional information about how to improve the conditions for sharing to best support the underlying goals of the NSS. Insofar as there are classified issues, we suggest that the Federal Government allow cleared stakeholders to participate, as was done in previous proceedings, including in the lead-up to the AWS-3 auction and in the recent PATHSS process. Further, the Federal Government should consider ways to provide additional opportunities for stakeholders to obtain clearances as needed.



Swift Deployment of Shared Licensed Spectrum in the 37 GHz Band

Given commercial and federal spectrum needs, spectrum sharing should not be limited to only the 3.1-3.45 GHz band. Although not a substitute for lower 3 GHz spectrum, a licensed sharing regime is ripe for quick deployment in the 37 GHz band. There is already a comprehensive (multi-year) Federal Communications Commission (FCC) record on how to enable shared use by a broad range of users in this band, and it can be made available quickly for commercial and federal operation given the existing equipment ecosystem. Prolonged additional study of this band is unnecessary, and any NSS Implementation Plan should point to the comprehensive FCC record for the 37 GHz band and direct the FCC to establish rules for commercial services in the band using database-centered, licensed sharing.

The swift deployment of shared spectrum for low-power, local licensing in the 3.1-3.45 GHz band and the 37 GHz band will help NTIA and its partners build upon their successful track records by prioritizing diversity in spectrum ownership and use cases – not exclusive use by a handful of wireless providers. Consumers win when providers compete, and implementation of the National Spectrum Strategy should focus on maximizing the immediate benefits of America’s finite spectrum resources.

Thank you for your attention to this important issue. We look forward to working with the Administration to accelerate progress in the months ahead.

Sincerely,

Spectrum for the Future